



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,130	04/21/2004	Taehyoun Kim	BO1-0141US	5425
60483	7590	05/18/2007	EXAMINER	
LEE & HAYES, PLLC 421 W. RIVERSIDE AVE. SUITE 500 SPOKANE, WA 99201			COUSO, YON JUNG	
			ART UNIT	PAPER NUMBER
			2624	
			MAIL DATE	DELIVERY MODE
			05/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/829,130

Applicant(s)

KIM, TAEHYOUN

Examiner

Yon Couso

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-18 is/are allowed.
- 6) ☒ Claim(s) 1-14 and 19-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/2/04</u> . | 6) <input type="checkbox"/> Other: _____ |

1. Claims 2-5, 7-9, 13-14, and 21-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2, it is not clear how the step of sampling individual pulse responses for a first time step and a second time step is connected in relation to the claim 1. Also it is not clear as to what the first time step and the second time step are.

Claim 3, it is not clear how the step of sampling a system response y^n for $n=0,1,2,\dots M$ is connected in relation to the claim 1.

Claim 4 is also not clear how the Hankel-like matrices connected in relation to the claim 1.

Claim 5 is not clear how the system matrices (A,B,C,D) are connected in relation to the Hankel-like matrices in claim 4.

Claim 7 is not clear how the number of input samples equal to $M+1+2XN_i$ is connected to claim 4.

Claim 8 is not clear how the augmented matrices are connected to claim 1.

Please check the dependency of the claim.

Claim 9 is not clear how the total number of samples is connected to claim 8.

Claim 13, it is not clear what is SCI/ERA ROM is. There is no antecedent basis for the SCI/ERA ROM.

Claim 14 depends from an indefinite antecedent claim.

Claim 19 has the same problem as claim 13.

Claim 21 is not clear how the step of sampling individual pulse responses for a first time step and a second time step is connected in relation to the claim 20. Also it is not clear as to what the first time step and the second time step are.

Claim 22 is also not clear how the matrices connected in relation to the claim 20.

Claim 23 is not clear how the system matrices (A,B,C,D) are connected in relation to the matrices in claim 22.

Claim 24 is not clear how the augmented matrices are connected to claim 22.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 10-12, 20, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim "An efficient Response-Based Modal Analysis for Dynamic Systems with Multiple Inputs".

As to claim 1, Kim teaches a method of model reduction and system identification of a dynamic system with multiple inputs, comprising: generating a plurality of statistically independent random numbers for use as input signals (page 2, column 1, line 22-page 3, column 2, line 31); and performing a singular-value-decomposition directly on a system response of the dynamic system due to a simultaneous excitation of the plurality of input signals (page 3, column 2, line 32-page 4, column 2, line 11).

As to claim 10, Kim teaches that at least some of the input signals are filtered through a low-pass filter (page 6, third paragraph).

As to claim 11, Kim teaches that the plurality of input signals includes applying multiple step inputs in a sequential manner (page 3, 3.2 Multiple Input Case).

As to claim 12, Kim teaches that the plurality of input signals includes applying multiple pulse inputs in a sequential manner (page 3, 3.2 Multiple Input Case).

As to claim 20, Kim teaches a method of simulating a fluid flow, comprising: generating a plurality of statistically independent random numbers for use as input signals (page 2, column 1, line 22-page 3, column 2, line 31); and performing a singular-value-decomposition directly on a fluid response due to a simultaneous excitation of the plurality of input signals (page 3, column 2, line 32-page 4, column 2, line 11).

As to claim 25, Kim teaches that the at least some of the input signals are at least one of filtered through a low-pass filter, applied in multiple step inputs in a sequential manner, and applied in multiple pulse inputs in a sequential manner (page 3, 3.2 Multiple Input Case and page 6, third paragraph).

3. Claim 4-9, 13-14, 22-24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

4. Claims 15-18 are allowed.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Zhao et al and Shah are cited.

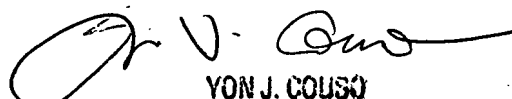
Art Unit: 2624

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yon Couso whose telephone number is (571) 272-7448. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis, can be reached on (571) 272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YJC


YON J. COUSO
PRIMARY EXAMINER

May 13, 2007